

Please add the following claims:

1 --60. A purified DNA, wherein the DNA has the formula:

ATGTTTGACTGTATGGATGTTCTGTCAGTGAGTCCTGGGCAAATCCTGGATTTCTACACTGCGAGT
CCGTCTTCCTGCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTCAGTGGATTGACCCAAACCGAA
TGGCAGCATCGGCACACTGCTCAATCAATTGAAACACAGAGCACCAGCTCTGAGGAACTCGTCCCA
AGCCCCCATCTCCACTTCCTCCCCCTCGAGTGTACAAACCCTGCTTCGTCTGCCAGGACAAATCA
TCAGGGTACCCTATGGGGTCAGCGCCTGTGAGGGATGTAAGGGCTTTTCCGCAGAAGTATTCAGA
AGAATATGATTTACACTTGTCAACGAGATAAGAACTGTGTTATTAATAAAGTCACCAGGAATCGAT
GCCAATACTGTCGACTCCAGAAGTGCTTTGAAGTGGGAATGTCCAAAGAATCTGTCAGGAATGACA
GGAACAAGAAAAAGAAGGAGACTTCGAAGCAAGAATGCACAGAGAGCTATGAAATGACAGCTGAGT
GTAAATACACCACGAATTCCAGTGCTGACCATCGAGTCCGACTGGACCTGGGCCTCTGGGACAAAT
TCAGTGAAGTGGCCACCAAGTGCATTATTAAGATCGTGGAGTTTGCTAAACGTCTGCCTGGTTTCA
CTGGCTTGACCATCGCAGACCAAATTACCCTGCTGAAGGCCGCCTGCCTGGACATCCTGATTCTTA
GAATTTGCACCAGGTATACCCAGAACAAAGACACCATGACTTTCTCAGACGGCCTTACCCTAAATC
GAACTCAGATGCACAATGCTGGATTTGGTCCTCTGACTGACCTTGTGTTACCTTTGCCAACCAGC
TCCTGCCTTTGGAAATGGATGACACAGAAACAGGCCTTCTCAGTGCCATCTGCTTAATCTGTGGAG
ACCGCCAGGACCTTGAGGAACCGACAAAAGTAGATAAGCTACAAGAACCATTGCTGGAAGCACTAA
AAATTTATATCAGAAAAAGACGACCCAGCAAGCCTCACATGTTTCAAAGATCTTAATGAAAATCA
CAGATCTCCGTAGCATCAGTGCTAAAGGTGCAGAGCGTGTAATTACCTTGAAAATGGAAATTCCTG
GATCAATGCCACCTCTCATTCAAGAAATGATGGAGAATTCTGAAGGACATGAACCCTTGACCCCAA
GTTCAAGTGGGAACACAGCAGAGCACAGTCCTAGCATCTCACCCAGCTCAGTGGAAAACAGTGGGG
TCAGTCAGTCACCACTCGTGCAATAA.

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2 ~~61~~. DNA as claimed in claim ~~60~~¹, which is free of human serum proteins, viral proteins, and nucleotide sequences encoding said proteins.

3 ~~62~~. DNA as claimed in claim ~~60~~¹, which is free of human tissue.

4 ~~63~~. DNA comprising a radionuclide bonded to the DNA of claim ~~60~~¹.

5 ~~64~~. A hybrid duplex molecule comprising the DNA of claim ~~60~~¹ hydrogen bonded to nucleotides of complementary base sequence.

6 ~~65~~. Hybrid duplex molecule as claimed in claim ~~64~~⁵, wherein said nucleotides are DNA.

8 ~~66~~. Hybrid duplex molecule as claimed in claim ~~64~~⁵, wherein said nucleotides are RNA.

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7 ~~67~~. Hybrid duplex molecule as claimed in claim ~~65~~⁶, wherein a radionuclide label is bonded to said DNA.

9 ~~68~~. A recombinant vector comprising lambda-NM1149 having an EcoRI restriction endonuclease site into which has been inserted DNA as claimed in claim ~~60~~¹.

10 ~~69~~. An E. coli bacterial culture in a purified form, wherein the culture comprises E. coli cells containing a plasmid, wherein a portion of said plasmid contains DNA as claimed in claim ~~60~~¹.

11 ~~70~~. Bacterial culture as claimed in claim ~~69~~¹⁰, wherein said cells are comprised of E. coli strain TG-1.

19 ~~71~~. Plasmid pCOD20.

12 ~~72~~. A hybridization process comprising contacting under hybridization conditions a polynucleotide with the DNA as claimed in any one of claims ^{1 to 4}~~60-63~~.

13 ~~73~~. Process as claimed in claim ¹²~~72~~, wherein said polynucleotide is DNA.

14 ~~74~~. Process as claimed in claim ¹³~~73~~, wherein said polynucleotide is identified by Southern blot technique.

15 ~~75~~. Process as claimed in claim ¹²~~72~~, wherein said polynucleotide is RNA.

16 ~~76~~. Process as claimed in claim ¹⁵~~75~~, wherein said polynucleotide is identified by Northern blot technique.

~~77. Process as claimed in claim 72, wherein said process comprises the step of detecting a label bonded to said DNA claimed in claim 1.~~

18 ~~78~~. Process as claimed in claim ¹⁷~~77~~, wherein said label is a radionuclide.

20 19. A purified DNA coding on expression in a unicellular host for a polypeptide having the sequence:

MetPheAspCysMetAspValLeuSerValSerProGlyGlnIleLeuAspPheTyrThrAla
SerProSerSerCysMetLeuGlnGluLysAlaLeuLysAlaCysPheSerGlyLeuThrGln
ThrGluTrpGlnHisArgHisThrAlaGlnSerIleGluThrGlnSerThrSerSerGluGlu
LeuValProSerProProSerProLeuProProProArgValTyrLysProCysPheValCys
GlnAspLysSerSerGlyTyrHisTyrGlyValSerAlaCysGluGlyCysLysGlyPhePhe
ArgArgSerIleGlnLysAsnMetIleTyrThrCysHisArgAspLysAsnCysValIleAsn
LysValThrArgAsnArgCysGlnTyrCysArgLeuGlnLysCysPheGluValGlyMetSer
LysGluSerValArgAsnAspArgAsnLysLysLysLysGluThrSerLysGlnGluCysThr
GluSerTyrGluMetThrAlaGluLeuAspAspLeuThrGluLysIleArgLysAlaHisGln
GluThrPheProSerLeuCysGlnLeuGlyLysTyrThrThrAsnSerSerAlaAspHisArg
ValArgLeuAspLeuGlyLeuTrpAspLysPheSerGluLeuAlaThrLysCysIleIleLys
IleValGluPheAlaLysArgLeuProGlyPheThrGlyLeuThrIleAlaAspGlnIleThr
LeuLeuLysAlaAlaCysLeuAspIleLeuIleLeuArgIleCysThrArgTyrThrProGlu
GlnAspThrMetThrPheSerAspGlyLeuThrLeuAsnArgThrGlnMetHisAsnAlaGly
PheGlyProLeuThrAspLeuValPheThrPheAlaAsnGlnLeuLeuProLeuGluMetAsp
AspThrGluThrGlyLeuLeuSerAlaIleCysLeuIleCysGlyAspArgGlnAspLeuGlu
GluProThrLysValAspLysLeuGlnGluProLeuLeuGluAlaLeuLysIleTyrIleArg
LysArgArgProSerLysProHisMetPheProLysIleLeuMetLysIleThrAspLeuArg
SerIleSerAlaLysGlyAlaGluArgValIleThrLeuLysMetGluIleProGlySerMet
ProProLeuIleGlnGluMetMetGluAsnSerGluGlyHisGluProLeuThrProSerSer
SerGlyAsnThrAlaGluHisSerProSerIleSerProSerSerValGluAsnSerGlyVal
SerGlnSerProLeuValGln.

- 21/ 80. DNA selected from the group consisting of:
- (a) GTCAGGAATGACAGGAACAAGAAAAAGAAGGAGACTTCGAAGCAAGAATGC;
 - (b) GCTGAGTTGGAGATCTCACAGAGAAGATCCGA;
 - (c) GGGGTCAGTCAGTCACCACTCGTGCAA;
 - (d) AATGACAGGAACAAGAAAAAGAAGGAGACT;
 - (e) ATCTTTGACTGTATGGATGTTCTGTGTCAGTGAGTCCTGGGCAAATCCTGGATTT
CTACACTGCGAGTCCGTCTTCTGCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTC
AGTGGATTGACCCAAACCGAATGGCAGCATCGGCACACTGCTCAATCA; and
 - (f) CATGAACCCTTGACCCCAAGTTCAAGTGGGAACACAGCAGAGCACAGTCCTAG
CATCTCACCCAGCTCAGTGGAAAACAGTGGGGTCAGTCAGTCACCACTCGTGCAA.
- 22/ 81. DNA as claimed in claim 21/ 80, wherein the DNA is sequence
- (a).
- 23/ 82. DNA as claimed in claim 21/ 80, wherein the DNA is sequence
- (b).
- 24/ 83. DNA as claimed in claim 21/ 80, wherein the DNA is sequence
- (c).
- 25/ 84. DNA as claimed in claim 21/ 80, wherein the DNA is sequence
- (d).
- 26/ 85. DNA as claimed in claim 21/ 80, wherein the DNA is sequence
- (e).
- 27/ 86. DNA as claimed in claim 21/ 80, wherein the DNA is sequence
- (f).

28 ~~87~~. A hybridization process comprising contacting under hybridization conditions a polynucleotide with the DNA as claimed in any one of claims ^{20 to 29} ~~79-86~~.

29 ~~88~~. Plasmid pPROHAP.

30 ~~89~~. A purified DNA of the formula:

CCCATGC

GAGCTGTTTGAGGACTGGGATGCCGAGAACGCGAGCGATCCGAGCAGGGTTTGTCTGGGCACCGT
ATGTTTGACTGTATGGATGTTCTGTCAGTGAGTCCTGGGCAAATCCTGGATTTCTACACTGCGAGT
CC
GTCTTCCTGCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTCAGTGGATTGACCCAAACCGAATG
GCAGCATCGGCACACTGCTCAATCAATTGAAACACAGAGCACCAGCTCTGAGGAACTCGTCCCAAG
CCCCCATCTCCACTTCCTCCCCCTCGAGTGTACAAACCCTGCTTCGTCTGCCAGGACAAATCATC
AGGGTACCACTATGGGGTCAGCGCCTGTGAGGGATGTAAGGGCTTTTTCCGCAGAAGTATTCAGAAG
AATATGATTTACACTTGTCACCGAGATAAGAACTGTGTTATTAATAAAGTCACCAGGAATCGATCG
CAATACTGTGCGACTCCAGAAGTGCTTTGAAGTGGGAATGTCCAAAGAATCTGTCAGGAATGACAGG
AACAAGAAAAAGAAGGAGACTTCGAAGCAAGAATGCACAGAGAGCTATGAAATGACAGCTGAGTTG
CACGATCTCACAGAGAAGATCCGAAAAGCTCACCAGGAACTTTCCCTTCACTCTGCCAGCTGGGT
AAATACACCACGAATTCCAGTGCTGACCATCGAGTCCGACTGGACCTGGGCCTCTGGGACAAATTC
AGTGAAGTGGCCACCAAGTGCATTATTAAGATCGTGAGTTTGCTAAACGTCTGCCTGGTTTCACT
GGCTTGACCATCGCAGACCAAATTACCCTGCTGAAGGCCGCTGCCTGGACATCCTGATTCTTAGA
ATTTGCACCAGGTATACCCAGAACAAGACACCATGACTTTCTCAGACGGCCTTACCCTAAATCGA
ACTCAGATGCACAATGCTGGATTTGGTCCTCTGACTGACCTTGTGTTACCTTTGCCAACCAGCTC
CTGCCTTTGGAAATGGATGACACAGAAACAGGCCTTCTCAGTGCCATCTGCTTAATCTGTGGAGAC
CGCCAGGACCTTGAGGAACCGACAAAAGTAGATAAGCTACAAGAACCATTGCTGGAAGCACTAAAA
ATTTATATCAGAAAAAGACGACCCAGCAAGCCTCACATGTTTCCAAAGATCTTAATGAAAATCACA
GATCTCCGTAGCATCAGTGCTAAAGGTGCAGAGCGTGTAATTACCTTGAAAATGGAAATTCCTGGA
TCAATGCCACCTCTCATTCAAGAAATGATGGAGAATTCTGAAGGACATGAACCCTTGACCCCAAGT
TCAAGTGGGAACACAGCAGAGCACAGTCCTAGCATCTCACCAGCTCAGTGGAACAGTGGGGTC
AGTCAGTCACCACTCGTGCAATAA.

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31/ ³⁰90. DNA as claimed in claim ~~89~~, which is free of human serum proteins, viral proteins, and nucleotide sequences encoding said proteins.

32/ ³⁰91. DNA as claimed in claim ~~89~~, which is free of human tissue.

33/ ³⁰92. DNA comprising a radionucleotide bonded to the DNA of claim ~~89~~.

34/ ³⁰93. A hybrid duplex molecule comprising the DNA of claim ~~89~~ hydrogen bonded to nucleotides of complementary base sequence.

35/ ³⁴94. Hybrid duplex molecule as claimed in claim ~~93~~, wherein said nucleotides are DNA.

36/ ³⁴95. Hybrid duplex molecule as claimed in claim ~~93~~, wherein said nucleotides are RNA.

37/ ³⁴96. Hybrid duplex molecule as claimed in claim ~~93~~, wherein a radionuclide label is bonded to said DNA.

38/ ³⁰97. An E. coli bacterial culture in a purified form, wherein the culture comprises E. coli cells containing a plasmid, wherein a portion of said plasmid comprises DNA as claimed in claim ~~89~~.

39/ ³⁸98. Bacterial culture as claimed in claim ~~97~~, wherein said cells are comprised of E. coli strain DH5αF'.--

REMARKS

Reconsideration of this application is respectfully requested.

The pending claims have been cancelled, and claims 60-98 have been added to the application. The new claims are derived from the previously pending claims as follows:

<u>NEW CLAIM</u>	<u>PREVIOUSLY PENDING CLAIM</u>
60	1
61	2
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